REMARKS

The Examiner has held that Claims 17-20 define patentable subject matter, but has rejected the remaining claims. Applicants have rewritten Claim 17 in independent form. Therefore, Claims 17-20 are believed allowable, and no further discussion of these claims is necessary.

Applicants have amended Claim 11 to overcome the rejections based on prior art, and have amended Claims 15 and 16 to make them depend, directly or indirectly, from Claim 11. Thus, the only pending independent claim rejected over prior art is Claim 11, and the following discussion will therefore concentrate on this claim.

1. Brace in view of Stücker

In the previous Amendment, Applicants modified Claim 11 to require that all of the points be located in the region of the sliding piece including the receiving means. The Examiner has held this language to be insufficient, because the "open" form of the claim allows for the possibility that there may be additional points in other regions of the device.

In response, Applicants have amended Claim 11 to recite that the device has no points which are located outside of the claimed region. This recitation clearly distinguishes over Brace and Stücker for the reasons given in the previous Amendment. The present claim, as amended, allows for the presence of more than two points, but does not permit the presence of any points outside the claimed region.

Therefore, Applicants submit that Claim 11 defines patentably over Brace and Stücker.

2. Shih

The Examiner has held that Claim 11 is anticipated by Shih. Applicants submit that Claim 11, as amended, defines patentably over Shih, for the following reasons.

Shih discloses a device comprising at least one connecting piece 10 for connecting two anchoring screws B to two fastening rods 40. The connecting piece 10 comprises two holes 124 to accommodate the passage and fixing of the two anchoring screws B. The connecting piece 10 comprises four points 122 conformed to penetrate into the bone of a vertebra. There are two receiving means 126. The points 122 are disposed by pairs in both the regions of the connecting piece 10, including the receiving means 126.

Thus, Shih discloses a structure in which each essential element is duplicated. Shih has two of each component.

The present invention, in contrast, is a much simpler structure, having only one occurrence of each constituting element.

In particular, the present invention has only one first hole conformed for the passage of an anchoring screw, and only one receiving means per connecting sliding piece.

Applicants have amended Claim 11 to include the above limitations. Amended Claim 11 now recites that there is only one first hole, only one receiving means, and only one fastening rod. Claim 11 clearly defines structure which is not shown in Shih.

Applicants submit further that the present invention is not obvious over Shih, for the following reasons.

Consider Figure 6 of the present application. The only screw (1, 1a) is clearly on the anterior part of the sliding piece (4, 4a), and therefore

access to the screw is facilitated (page 5, line 6). At the same time, the rod 3 is on the rear part and is closer to the rear of the vertebral column, better placed to support the vertebral column (page 13, line 5).

Shih cannot produce the same effects. One of its screws is at the rear part of the sliding piece, and access is not easy.

Moreover, when one considers only the disclosure of Shih, there is no teaching, for the person skilled in the art, of simplifying the product of Shih in order to derive the present invention.

Indeed, the person skilled in the art would be deterred from simplifying the product of Shih, because Shih seeks to provide a rigid product (column 1, lines 60-63).

Shih therefore teaches against eliminating some of its disclosed components, such as a rod, two points, and one anchoring screw. These are crucial elements in Shih, as they are used to rigidify its spinal fixation system.

Even if the person skilled in the art wanted to simplify Shih's product, there is no teaching of suppressing the right rod, the right hole conformed for the passage of a screw, and the right points, in order to obtain the effects of accessibility, sufficient rigidity, durability and stability.

The choice of the right rod allows a particular and important positioning of the remaining rod, in order that it be as close as possible to the equilibrium axis of the column, which is located near the posterior face of the column and vertebrae.

The closer the rod is located to the posterior face of the column, the less stress is transmitted to the screws and fastening means when the patient bends.

Positioning of the rod near the rear portion of the column decreases the stress transmitted to the fastening means (i.e. screws, points, etc.) and thus improves the durability and stability of the device, and of its anchoring.

The choice of the right first hole allows a particular and important positioning of the remaining screw, in order to make the screw fully accessible for a screwdriver when the rod and the device are offset to the rear portion of the column.

Moreover, the head of the screw is slightly directed towards the anterior face of the vertebrae, enabling easy screwing from the anterior face of the column.

The positioning of the remaining points is important in order to enable the surgeon to offset the rod rearwardly, since he or she does not need any accessibility for a screwdriver and a screw which is inconveniently located.

Using the disclosure of Shih as the starting point, the selection process required of the person skilled in the art would itself rise to the level of invention.

Thus, Applicants submit that the claimed invention is not obvious over Shih.

For the reasons given above, Applicants submit that the application, as amended, is in condition for allowance. Applicants request reconsideration by the Examiner, and early favorable action.